

Japan Coast.

17<sup>th</sup> May - 5<sup>th</sup> June  
1900.

D: 3736 - D: 3771

H: 4012 - H: 4041

3735 57

1881 18 1881

	2500	
	2600	
	2700	
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	next	Hyd * 4012.		
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Hutchinson

No. 3736 Date 17 May 1900

Machine #3 Reel. Built up

Turns 545 Cor. + 54 Depth 599 fms

Shot or lead 35 pound (to 490 fms)

Bottom stf. bu. M. St.

Bottom temperature

No. of thermometer

Corrected temperature

None Cor.

Air 61

Surface 64

Drift

N 14° W  
1 1/2 m

Trawl or dredge 8-ft Tanner - no wings

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

DOWN.	UP.	TURNS.	DOWN.	UP.
7.17.20	7.29.00	0	7.35.05	54.25
18.30	28.00	100	39.30	50.30
19.20	27.10	200	43.30	47.30
20.30	26.20	300	47.30	44.30
21.20	25.30	400	51.20	39.30
22.20	24.40	500	55.10	34.40
7.23.00	7.24.10	545	57.10	29.40
		600		28.10
		635		28.50
		700	8-02.40	18.50
		800		11.15
		900		
		1000		
		1100		
		1200		
		1300	Dragged trawl 25 Min	
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Ose Zaki, S. 83° E., 8.1 miles.

Suruga Bay.

OK  
HCO  
in

Increased depth  
over ascending  
slope to 480 fms.  
at end of trial.

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

Jap. chart #80.  
35° 02' 35" N  
138° 37' 20" E.

5035 260  
545 206  
4490 54  
545  
599

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	<u>Contents of net.</u>			
50	Fishes 10ps			
100	Lamellebranchia 10ps.			
200	Holothuria 1 "			
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. 3737 Date 17 May 1900  
 Tanner Machine. Reel.

Turns 155 Cor. + 6 Depth 161 fm

Shot or lead 35# to 167

Bottom <sup>gn.</sup> vol. M and S.

Bottom temperature

No. of thermometer } none Cor.

Corrected temperature } N 14.8.

Air 65 Surface 65 Drift } 1.1 m

Trawl or dredge 6 Tangle Swale.

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

10-07.25	10.20	0	10-14.20	11-01.30
08.20	09.15	100	18.20	57.50
08.40	08.50	155	22.20	55.20
		200	24.45	53.40
		250		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Int. Deca Hbr, N 19° E. 1.9 m.

Laruga Gulf.

OK  
H.C. 2.

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

Jap. chart 280.  
34° 57' 10" N  
138° 44' 10" E.

496  
155  
341  
12  
6  
6  
155  
161  
fm

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Contents of net -			
50				
100	1 sp	Gastropods		
200	1 "	Lamellibranchs		
300	1 "	Crustacea macrura		
400	1 "	Annelids		
500	3 "	Ophiura		
600	8 "	Holothurians		
700	2 "	Acynaria		
800				
900				
1000				

REMARKS:

*Dutchinson*

No. *3738 D-*

Date *17<sup>th</sup> May 1900.*

Tanner Machine. Reel.

Turns *160* Cor. + *7* Depth *167 fms.*

Shot or lead *26 lb*

Bottom *sft. br. M.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *71* Surface *67* Drift *N 10° E, 1.2 m*

Trawl or dredge *8' Tanner, No. Wrights*

SOUNDING WIRE.

TURNS.

DREDGE ROPE.

DOWN.

UP.

DOWN.

UP.

<i>11-0710</i>	<i>10.45</i>	<i>0</i>	<i>11-14-30</i>	<i>12.00.00</i>
<i>07.50</i>	<i>09.20</i>	<i>100</i>	<i>18.45</i>	<i>56.30</i>
<i>08.15</i>	<i>08.25</i>	<i>160</i>	<i>23.10</i>	<i>53.10</i>
		<i>200</i>	<i>24.50</i>	
		<i>210</i>	<i>22.10</i>	
		<i>225</i>	<i>42.55</i>	
		<i>240</i>	<i>45.40</i>	<i>11.51.30</i>
		<i>245</i>		
		<i>400</i>		
		<i>500</i>		
		<i>600</i>		
		<i>700</i>		
		<i>800</i>		
		<i>900</i>		
		<i>1000</i>		
		<i>1100</i>		
		<i>1200</i>		
		<i>1300</i>		
		<i>1400</i>		
		<i>1500</i>		
		<i>1600</i>		
		<i>1700</i>		
		<i>1800</i>		
		<i>1900</i>		
		<i>2000</i>		
		<i>2100</i>		
		<i>2200</i>		
		<i>2300</i>		
		<i>2400</i>		



Ent. Port Neda, N. 84° E., 1.2 m

Saraga Gulf.

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

Jap. chart #80.

34° 58' 20" N

138° 44' 40" E.

496

12

160

5

336

7

160

167

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Contents of net.			
50	✓ 6 sp	Fishes		
100	✓ 1 "	Enteropneusta		
200	✓ 1 "	Tunicata		
300	✓ 8 "	Gastropods		
400	✓ 5 "	Lamellibranchs		
500	✓ 1 "	Dentalium		
600	✓ 5 "	Crustacea macrura		
700	✓ 1 "	" brachyura		
800	✓ 2 "	Amphipods		
900	✓ 2 "	Isopods		
1000	✓ 4 "	Echini		

✓ 8 " Annulids

## REMARKS:

✓ 1 " Actinia

✓ 3 " Corals

507. *W. W. L.*No. *3739* Date *17 May 1900*  
Machine. Reel. *—*Turns — Cor. + — Depth *55 to 65*  
Shot or lead *from chart*

Bottom

Bottom temperature } *Did not sound*

No. of thermometer

Cor.

Corrected temperature

Air *67* Surface *65* Drift *0.9 m*Trawl or dredge *Single bar. 2 Swats*

## SOUNDING WIRE.

## DREDGE ROPE.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	<i>12.52.45</i>	<i>129.30</i>
		100	<i>12.58.40</i>	<i>125.50</i>
		110	<i>1.10.35</i>	<i>122.30</i>
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat 34° 25' N., 24 m.

Yard 110

2500 138° 47' 20" E.

2600 138° 47' 20" E.

2700 138° 47' 20" E.

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Broken, the net is not			
50				
100				
200	Content of net -			
300				
400	✓ 1	10	Pterichopoda	
500	✓ 1	"	Polyzoa	
600	✓ 4	"	Gastropoda	
700	✓ 3	"	Anomura crustacea	
800	✓ 8	"	Annelids	
900	✓ 3	"	Echinodermata	
1000	✓ 1	"	Uctinids	

REMARKS:

1272

No. 1272 Date 11/1/1880

Machine. Reel.

Turns Cor. + Depth 65 fms.

Shot or lead 35 lbs. from chart.

Bottom Did not sound

Bottom temperature

No. of thermometer 10000 Cor. 8.60° E.

Corrected temperature 0.5 m. 1.0

Air 67 Surface 65 Drift 1.0

Trawl or dredge

SOUNDING WIRE.		TURNS	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	21' 10"	
		100	21' 05"	
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Lat. 34° 50' N. Long. 131° 48' W.

	2500	35° 00' 10" N
	2600	131° 48' E
	2700	
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Contents of net -			
50				
100				
200	✓ 10 f	Branchiopods		
300	✓ 4 "	Gastropods		
400	✓ 6 "	Crustacea anomura		
500	✓ 1 "	Amphipods		
600	✓ 1 "	Crustacea macrura		
700	✓ 10 "	Annelids		
800	✓ 4 "	Ophiurans		
900				
1000				

REMARKS:

207. N. L.

No.

Date

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Oct 7, 1900. S. 29° 17' N., 3/4 m.

Alma Lopez.

Decrease to 50 fms from chart.

2500	Lat. Chart No. 80.
2600	35° 02' 10" N.
2700	138° 47' 40" E.
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Contents of net -			
50				
100	✓ 60 fms	5 fms		
200	✓ 2 "	N. white crabs		
300	✓ 2 "	Crustacean animals		
400	✓ 1 "	Cirrifieds (harvest)		
500	✓ 1 "	Stars		
600	✓ 2 "	Gophirans		
700	✓ 1 "	Actinia		
800	✓ 3 "	Alcyonaria		
900	✓ 3 "	Penicillaria		
1000	✓ 1 "	Sponges		

REMARKS:

No. 3742 Date 19 May 1900

Tanner Machine. Reel.

Turns 84 Cor. + 4 Depth 58 fms

Shot or lead 35 lb

Bottom gy s

Bottom temperature

No. of thermometer } Cor.

Corrected temperature } 27.0° C

Air 64 Surface 64 Drift 1 2/3 mi

Trawl or dredge 13 fms 5.5 mi

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

57.10 58.20

57.10 57.20

5.10.20 37.40

05.20 32.20

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400



Spec. No. 218476. 4. 8. 1900

Shrimp	2500	14.0	14.0
Sargassum	2600	14.5	14.5
100	2700	13.9	13.9
100	2800		
	2900		
	3000		
	3100		
	3200		
	3300		
	3400		
	3500	14.5	14.5
	3600	14.1	14.1
	3700		
	3800		
	3900		
	4000		

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	14.0	1		
50	14.5	Crustacean		
100	13.9	Starfish		
200	14.0	Crustacean		
300	14.0	Starfish		
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *507* Date *10 May 1901*

Machine. Reel.

Turns *55* Cor. + *2* Depth *57 fms*

Shot or lead *36 lb*

Bottom *gy. m. s.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature } *51.4708*

Air *64* Surface *64* Drift *1.2 m*

Trawl or dredge *30 ft. beam trawl*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

<i>41.30</i>	<i>42.15</i>	0	<i>27.10</i>	
<i>41.30</i>	<i>41.30</i>	100	<i>27.20</i>	
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Sumo Lake, 3888' E, 4-51 am

Mineral Point  
Sagami Cove  
H.C.  
H.C.

2500	139° 34' 15" E	
2600	139° 34' 15" E	
2700	139° 34' 15" E	
2800		
2900		
3000		
3100		
3200		
3300		
3400	496	12
3500	55	10
3600	55	2
3700	55	5-7
3800		
3900		
4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	No specimens. all blank bottle. and several small bottle carried away			
50				
100				
200				
300				
400				
500	12 v	Crinoid		
600	11 v	Alcyonaria		
700	12 v	Sponge		
800				
900				
1000				

REMARKS:

Dredging engine broke down.  
Deposits over 14' mud, with 1 1/4  
line.

No. *3744* Date *10 March 1900*  
*Tanner* Machine. Reel. *1*  
 Turns *44* Cor. + *2* Depth *46 fms*  
 Shot or lead *26 lb*  
 Bottom *m. G.*  
 Bottom temperature  
 No. of thermometer } *11500* Cor. }  
 Corrected temperature } *52.4°*  
 Air *64* Surface *64* Drift *1/2 mi*  
 Trawl or dredge *10 ft. beam trawl*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>1-34.40</i>	<i>41.20</i>	0	<i>6-34.40</i>	<i>7.00</i>
<i>40.30</i>	<i>40.35</i>	<i>44</i>	<i>37.10</i>	<i>5.50</i>
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

San Diego, Cal., 8 Oct. 9 5/6 am

Alvin Clark  
Samuel S. ...  
O. ...  
A. ...  
S. ...

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

540 58' 50" N  
139° 30' 40" E.

49.6  
44  
45.2

1.2  
1.3  
2  
4.4  
4.6

1 3/4

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	no catch			
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Surface run by hand, with  
15' rope.  
Sounded after lowering bar.  
Last ...

No. 2745 Date 14 May 1900

Machine. Reel.

Turns 44 Cor. + 2 Depth 46 fms

Shot or lead 26 lb

Bottom gy S y B

Bottom temperature

No. of thermometer } 7000 Cor. 0.375

Corrected temperature

Air 54 Surface 64 Drift 1/2 m

Trawl or dredge 10 ft Rac with hook

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

7 07.20

09.20

0

7 06.30

07.10

38.30

08.40

44

08 =

07.10

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*Suno Lake, 3189' S. 82/4 m*

*Alkaline Lake*

*Sagami Sea*

*OK*

*1100?*

*2*

2500	<i>Lat 34° 58' 30"</i>	
2600	<i>34° 58' 30"</i>	
2700	<i>139° 34' 55" E</i>	
2800		
2900		
3000		
3100		
3200		
3300		
3400	<i>446</i>	<i>12</i>
3500	<i>42</i>	<i>10</i>
3600	<i>402</i>	<i>2</i>
3700		<i>44</i>
3800		<i>46</i>
3900		
4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50	<i>✓ 1</i>	<i>5</i>		
100	<i>✓ 1</i>	<i>6</i>		
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

*Surface temp. 11.0° C.*

No. 3116 Date 19 May 1900

Machine. Reel.

Turns 47 Cor. + 112 Depth 149 1/2Shot or lead 26Bottom gy. S. + P

Bottom temperature

No. of thermometer 1112

Cor.

Corrected temperature

Air 61Surface 61Drift East

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS

DOWN.

UP.

0  
47  
 100  
 200  
 300  
 400  
 500  
 600  
 700  
 800  
 900  
 1000  
 1100  
 1200  
 1300  
 1400  
 1500  
 1600  
 1700  
 1800  
 1900  
 2000  
 2100  
 2200  
 2300  
 2400

213



4000

[illegible]

REMARKS:

No.

Date 14 May 1908

Machine. - Reel.

Turns 40 Cor. +

Depth 45

Shot or lead 36 lb.

Bottom 60.7.4.

Bottom temperature

No. of thermometer 11110

Cor.

Corrected temperature

Air

Surface 64

Drift None

Trawl or dredge

Hared Lines.

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0  
100  
200  
300  
400  
500  
600  
700  
800  
900  
1000  
1100  
1200  
1300  
1400  
1500  
1600  
1700  
1800  
1900  
2000  
2100  
2200  
2300  
2400

8-41

9-11

Sun. Jan. 1888. 7.9 m

Sagami Sea OK HCO 2	2500	34° 58' 20" N 139° 35' 55" E
	2600	
	2700	
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200	no water			
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Put over 5. fish. Red  
 water nothing.  
 Bait - fresh fish -

No. *76* Station *101* Date *July 14*  
Machine. *Lucas* Reel. *1*  
Turns. *125* Cor. + *5* Depth *130*  
Shot or lead *26 #*  
Bottom *M. S. & brk. G.*  
Bottom temperature *11.0*  
No. of thermometer *7110* Cor. *0*  
Corrected temperature *11.0*  
Air *68* Surface *64* Drift *0*  
Trawl or dredge *0*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. \_\_\_\_\_ Date \_\_\_\_\_  
 Machine. \_\_\_\_\_ Reel. \_\_\_\_\_  
 Turns \_\_\_\_\_ Cor. + \_\_\_\_\_ Depth 73 f  
~~Shot or lead~~ \_\_\_\_\_ 10/200  
 Bottom \_\_\_\_\_ not  
 Bottom temperature \_\_\_\_\_  
 No. of thermometer \_\_\_\_\_ 1111 Cor. \_\_\_\_\_  
 Corrected temperature \_\_\_\_\_  
 Air \_\_\_\_\_ Surface \_\_\_\_\_ Drift \_\_\_\_\_  
 Trawl or dredge 2

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<u>18</u>		0		
		<u>70</u>		
		<del>100</del>		
		<del>200</del>		
		<u>200</u>		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

June 2nd, S. 88° E. 8.8 m

Okinose Bank	2500	Chart 1180.
Sagami Sea	2600	Depth
	2700	34° 59' 10" N
	2800	139° 34' 45" E.
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400 V	1 20	Pomellia		
500 V	1 "	7ch		
600 V	1 "	Styrodonta		
700 V	3 "	Polygona		
800 V	1 "	Cucurbitina		
900 V	5 "	Spongia		
1000				

REMARKS:

507  
 Staley  
 No. 520710 Date 19-11-11  
 Machine. Reel.  
 Turns 1 Cor. + Depth 158 47.1 V  
 Shot or lead 76 #  
 Bottom bk. s. s.  
 Bottom temperature )  
 No. of thermometer Cor.  
 Corrected temperature  
 Air -10 Surface 61 Drift 1 1/2  
 Trawl or dredge Jaws

SOUNDING WIRE.

DREDGE ROPE.

DOWN.	UP.	TURNS.	DOWN.	UP.
08	11.5	100	11.5	11.5
0	10.1	150	11.1	11.0
		175		10.0
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



1000 fathoms, 855 fms. 9.4 m.

Glenn H. Clark  
Sagami Sea

	2500	1390 30'	35" N
	2600		E
	2700		
	2800		
	2900		
	3000		
	3100		
	3200		
	3300		
	3400		
	3500		
	3600		
	3700		
	3800		
	3900		
	4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	✓ 2	Panulirus		
50	✓ 3	Amphipoda		
100	✓ 5	Echinus		
200	✓ 3	Starfish		
300	✓ 1	Opiliones		
400	✓ 3	Alcyonaria		
500	✓ 2	Cnidaria		
600	✓ 1	"		
700	✓ 5	Spongia		
800				
900				
1000				

REMARKS:

Station

Date 19 July 1900

No.

Date

Machine

Reel

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
10 30.10	10 30.10	0		
10 30.45	10 30.45	100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

	2500	
	2600	
	2700	
	2800	
	2900	405
	3000	57
	3100	349
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

175  
6  
15  
77  
101

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *150*Date *10/1/00*Machine *W. H. S.*

Reel.

Turns *80*Cor. + *2*Depth *50*Shot or lead *26 #*Bottom *brk sh. & P. gy S*

Bottom temperature

No. of thermometer *none*

Cor.

Corrected temperature

Air *70*Surface *65*Drift *7 1/2*Trawl or dredge *4 ft. dredge*

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

<i>12.1.30</i>	<i>1.15</i>	<i>0</i>	<i>10.17.06</i>	<i>30</i>
<i>14.15</i>	<i>1.21</i>	<i>100</i>	<i>56.00</i>	<i>16.30</i>
		<i>200</i>	<i>30</i>	<i>11.15.30</i>
		<i>300</i>		
		<i>400</i>		
		<i>500</i>		
		<i>600</i>		
		<i>700</i>		
		<i>800</i>		
		<i>900</i>		
		<i>1000</i>		
		<i>1100</i>		
		<i>1200</i>		
		<i>1300</i>		
		<i>1400</i>		
		<i>1500</i>		
		<i>1600</i>		
		<i>1700</i>		
		<i>1800</i>		
		<i>1900</i>		
		<i>2000</i>		
		<i>2100</i>		
		<i>2200</i>		
		<i>2300</i>		
		<i>2400</i>		

May 20th. 8, 89° E. 4 1/4 m

Ship's Log	2500	139° 34' E.
Sounding	2600	
	2700	
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Ground in front of ship to 140 fms			
50				
100				
200				
300				
400				
500				
600				
700	✓ 1 0/10	Pycnogonid		
800	✓ 1 "	Echini		
900	✓ 1 "	ophiuran		
1000	✓ 1 "	annelid		

✓ 4 "

REMARKS:

Sponges

No. 2951

Date June 10, 1880

Machine. — Reel.

Turns 142 Cor. + 6

Depth 148 fms

Shot or lead 26 #

Bottom gn. M-1 Vol. S. No 140 fms

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 70

Surface 65

Drift

Trawl or dredge 4 ft. beam trawl

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

150

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

June 2nd 1887. 8.15 m

Okinawa Bank

Sagami Sea

OK  
H. J. M.

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

34° 51' 20" N  
139° 35' 05" E

512

6

125

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	✓ 3 0.0	Pomelle branch		
200	✓ 1 "	Nemertinae		
300	✓ 3 "	Annulida		
400	✓ 1 "	Echini		
500	✓ 2 "	Gastropoda		ammonia
600	✓ 1 "	"		brachyopoda
700	✓ 1 "	"		macrura
800	✓ 2 "	Polyzoa		
900	✓ 2 "	Sponges		
1000				

REMARKS:

No. *50052* Date *10 May 1901*  
*Reel* Machine. Reel. *1*  
 Turns *6* Cor. + *2* Depth *8*  
 Shot or lead *35* to 100 to 54  
 Bottom *gy & M gy*  
 Bottom temperature  
 No. of thermometer *None* Cor.  
 Corrected temperature  
 Air *73* Surface *66* Drift *N 3° E 5/6 m*  
 Trawl or dredge *Agassiz*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>12.39.40</i>	<i>12</i>	0	<i>12.39.12</i>	<i>11.50</i>
<i>12.40.00</i>	<i>11</i>	100	<i>12.40.00</i>	<i>11.40</i>
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



June 24, 1911. 34 m

2500	HO 21791.
	34° 54' 35" N
2600	139° 41' 20" E
2700	2440 y
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	✓ 10°	Pycnogonid		
200	✓ 1 "	Echini		
300	✓ 2 "	Ophiurans		
400	✓ 1 "	Annelids		
500	✓ 2 "	Crustacea anomura		
600	✓ 2 "	Polyzoa		
700	✓ 3 "	Alcyonaria		
800	✓ 2 "	Sponges		
900				
1000				

# REMARKS:

5. Trawl on bottom at 1250 ft.  
 Bait: fresh fish & fresh meat.  
 2. Trawls only, not at 1.00

No. *10* Date *17 May 1900**anner* Machine. Reel.Turns *174* Cor. + *7* Depth *181 fms*Shot or lead *26 pounds*Bottom *Co, S, &*

Bottom temperature

No. of thermometer *none* Cor.

Corrected temperature

Air Surface Drift

Trawl or dredge

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

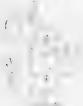
2000

2100

2200

2300

2400

<i>Wagon</i> 		2500	<i>Ho X 10 91</i>	
		2600		
		2700		
		2800		
		2900		
		3000		
		3100		
		3200		
		3300		
		3400		
		3500		
		3600		
		3700		
		3800		
		3900		
		4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No.

Date

Machine.

Reel.

Turns

Cor. +

Depth

~~Shot or lead~~

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

## SOUNDING WIRE.

## DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Catfish -

1 sp. Neleporia

3 a. Alcyonaria

1 a. Pennatulid

1 a. Annelids

3 a. Sponges

Harry Campbell

2500	40° 12' 21"
2600	35° 00' 25" N
2700	134° 41' 35" E
2800	
2900	
3000	
3100	
3200	
3300	
3400	
3500	
3600	
3700	
3800	
3900	
4000	

## SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

## REMARKS:

148

No. *3411* Date *19 May 1900*

Machine. Reel.

Turns *10* Cor. + *5* Depth *548*

Shot or lead *26 lb. m. m. d.* *520*

Bottom *gy. s.*

Bottom temperature

No. of thermometer *1601* Cor.

Corrected temperature

Air *15* Surface *14* Drift *61*

Trawl or dredge *8' Tanner* *no weights*

SOUNDING WIRE.		TURNS	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>11 00</i>	<i>2 12 15</i>	<i>0</i>	<i>5 31 15</i>	<i>2 59 30</i>
<i>11 00</i>	<i>2 11 30</i>	<i>100</i>	<i>5 31 15</i>	<i>2 56 00</i>
		<i>200</i>		
		<i>300</i>		
		<i>400</i>		
		<i>500</i>		
		<i>600</i>		
		<i>700</i>		
		<i>800</i>		
		<i>900</i>		
		<i>1000</i>		
		<i>1100</i>		
		<i>1200</i>		
		<i>1300</i>		
		<i>1400</i>		
		<i>1500</i>		
		<i>1600</i>		
		<i>1700</i>		
		<i>1800</i>		
		<i>1900</i>		
		<i>2000</i>		
		<i>2100</i>		
		<i>2200</i>		
		<i>2300</i>		
		<i>2400</i>		

Surf S.W. 86° E, 3.2 m

Moqa Channel

OK  
J.H.C.

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

34° 59' 40" N  
139° 41' 35" E

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400	✓ 5 obs	Fishes		
500	✓ 2 obs	Alcyonaria		
600	✓ 4 "	Crustacea anoxia		
700	✓ 1 "	Cephalopoda		
800				
900	✓ 4 "	Sponges		
1000				

REMARKS:

No. 3555 Date 19 May 1900

Machine. Reel. 52 to

Turns Cor. + Depth 77 m

Shot or lead 110 lb

Bottom gy. S. Co.

Bottom temperature

No. of thermometer 1777 Cor.

Corrected temperature

Air 12 Surface 66 Drift 16 mi

Trawl or dredge 8' beam trawl

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	3 04.00	3 22.55
		100	3 15.55	
		150	3 11.55	
		200	3 10.55	3 24.00
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



June 2nd. 5.1630 E. 3.6 m

Waga Channel

off  
good  
is

Two water was  
taken at end of  
line

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

No 412 91.  
35° 00' 10" N  
139° 41' 20" E.  
Approx.

1496  
174  
1622  
174  
174  
174

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	Sound at end of line and 9 ft from			
50				
100				
200				
300	2 sp. fish 1 sp. Pannell branch 1 " Hudi branch 4 " Crustacean isopoda 1 " Pycnogonids 1 " Echin. 1 " Crinoid			
400				
500				
600				
700				
800				
900				
1000				

REMARKS:  
✓ 3 " ophiurans  
✓ 2 " Alcyonaria  
✓ 2 " Sponges

No. 3

Date

Machine.

Reel.

Turns 74 Cor. +

3

Depth

77 fms

Shot or lead

26 pounds

Bottom

rot. Co.

Bottom temperature

No. of thermometer

Corrected temperature

Air

Surface

Drift

Trawl or dredge

8' Chamber No. 1 to

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

3 30

—

0

100

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

3 31.20 0850

3 35.20

3 39.20 4-15.30

Samo Lake, S. 60° E, 3 mi			
Wage Channel		2500	139° 42' 19" E
		2600	35° 00' 15" N
to 50 fms -		2700	139° 42' 05" E
		2800	
		2900	Temperature
		3000	
		3100	49.6 1.2
		3200	49.5 1.0
		3300	49.5 2
		3400	48
		3500	50 fms
		3600	
		3700	
		3800	
		3900	
		4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50	1.0	Fish		
100	1.0	Kadiak		
200	1 "	Ophiura		
300	1 "	Polygona		
400	1 "	Gleichenia		
500	1 "	Pendatula		
600	4 "	Sponges		
700				
800				
900				
1000				

# REMARKS:

Sounded at end of line  
 & found 50 fms

No. 3757 Date 19 May 1900.

Tanner Machine. — Recl.

Turns 48 Cor. + 2 Depth 50 (41)

Shot or lead 26 lb.

Bottom crs. co. S. G.

Bottom temperature

No. of thermometer { none Cor.

Corrected temperature { 85.5° E.

Air 73 Surface 65 Drift 2 m

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
4-10		0	4-16.45	38.50
		50	17.00	
		100		
		150		
		200	4-26.00	
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Line 500, 3, 640 E. 2.5 m

Mojo Channel	2500	No #1271
	2600	App 10
Oh	2700	340 59' 35" N
2800	2800	139° 42' 35" E.
	2900	
3000	3000	
hour 1	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25		Fish		
50	20	Pycnogonid		
100	10	Amphipod		
200	2	Crustacea		
300	1	"		
400	1	Amomura		
500	1	Opilurian		
600	1	Alcyonaria		
700	1	Fenestrata		
800	1	Spongia		
900				
1000				

REMARKS:

*Station*

No. *110* Station *19 May 1880*

*Tanner* Machine. — Reel.

Turns *39* Cor. + *2* Depth *41 fms*

Shot or lead *26 lb*

Bottom *gy S. G.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *73* Surface *65* Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>PM</i> 4. 39.30	<i>4. 41</i>	0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

	2500		
	2600		
	2700		
	2800		
	2900		
	3000		
	3100		
	3200		
	3300	496	
	3400	39	37
	3500	<u>457</u>	<u>2</u>
	3600		41
	3700		
	3800		
	3900		
	4000		

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	This sounding seems to develop depth at preceding haul -			
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *1012* Date *20/1/1881*

Tanner Machine. Reel. Turns *41* Cor. + *2* Depth *43 fms.*  
Shot or lead *26 pounds*

Bottom

Bottom temperature

No. of thermometer *none* Cor.

Corrected temperature

Air Surface Drift

Trawl or dredge *Small bar (55 links)*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

<i>6.28.00</i>	<i>6.28.55</i>	0	<i>6.31.50</i>	<i>6.33.00</i>
<i>6.28.10</i>	<i>6.28.20</i>	100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		





No. *3755* Date *22 June 1901*

Tanner Machine. Reel.

Turns *70* Cor. + *3* Depth *73 fms. 552*

Shot or lead *26 lb.* *40 52-100*

Bottom *bu. b. R.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *75* Surface *65* Drift *N 79° E 3 1/2 m*

Trawl or dredge *10' beam trawl*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>11- 26.15</i>	<i>27.50</i>	0	<i>10- 29.45</i>	<i>42.50</i>
<i>26.50</i>	<i>26.55</i>	<i>70</i>	<i>35.15</i>	<i>36.10</i>
		<i>400</i>		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Suno Saki, S 55° E. 2.1

Uraga p 11 3.55	Uraga	2500	140° 15' 31"
		2600	134° 50' 50" N
		2700	139° 43' 20" E
		2800	
		2900	
		3000	
		3100	
		3200	
		3300	496
		3400	70
		3500	426
		3600	
		3700	
		3800	
		3900	
		4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	✓ 2 sp	Actinia		
200	✓ 3 "	Annelids		
300	✓ 1 "	Crinoid		
400	✓ 1 "	Ophiurans		
500	✓ 2 "	Alcyonaria		
600	✓ 1 "	Pennatulids		
700	✓ 4 "	Sponges		
800				
900				
1000				

# REMARKS:

Soft Sponges & small corals

No. *5754 B* Date *22 May 1900*  
*Tanner* Machine. Reel.

Turns *50* Cor. + *1*

Depth *52 fms*

~~Shot or lead~~ *26 lb.*

Bottom *gy. S. fm. D. M. Sh. R.*

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *72*

Surface *66*

Drift

*N 49° W.  
3/10 m*

Trawl or dredge *10' Bar. with*

# SOUNDING WIRE.

DOWN.

UP.

TURNS.

# DREDGE ROPE.

DOWN.

UP.

<i>1-30</i>	<i>41.30</i>	0	<i>10:47.25</i>	<i>6.10</i>
		<i>75</i>		
		100	<i>53.10</i>	
		<i>85</i>		
		200	<i>54.40</i>	
		<i>95</i>		
		300	<i>55.10</i>	<i>06.30</i>
		<i>102</i>		
		400	<i>11:01.10</i>	<i>11:06 =</i>
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Sun's Sate, S 53° E. 2 1/4 mi.

Maga Tunnel		2500	45° 15' 41"
		2600	35° 00' 05" N
		2700	139° 45' 00" E
		2800	
		2900	
		3000	
		3100	
		3200	
		3300	
		3400	
		3500	
		3600	
		3700	
		3800	
		3900	
		4000	

496  
10  
206

12  
10  
2

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	✓ 10	Echini		
200	✓ 2	Ophiurans		
300	✓ 1	Sponge		
400				
500				
600				
700				
800				
900				
1000				

# REMARKS:

Base slightly bent

No. *No Station* Date *22 May 1900*

Machine. Reel.

Turns *125* Cor. + *5* Depth *130 fms*

Shot or lead *26*

Bottom

Bottom temperature

No. of thermometer *2100* Cor.

Corrected temperature

Air *72* Surface *66* Drift

Trawl or dredge *10' Rev. with hook*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>11-18.40</i>	<i>20.10</i>	0	<i>11-18.40</i>	
<i>12.00</i>	<i>19.55</i>	100	<i>24.20</i>	
<i>12.40</i>	<i>19.40</i>	125	<i>24.30</i>	
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

	2500		
	2600		
	2700		
	2800		
	2900		
	3000		
	3100		
	3200		
	3300		
	3400		
	3500	446	12
	3600	125	7
	3700	571	<hr/> 5
	3800		
	3900		
	4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. 3760 Date 22 May 1900

Machine. Reel.

Turns 50 Cor. + 3 Depth 83 fm

Shot or lead 26 lb. - to 50 fm

Bottom gy. s. + c.

Bottom temperature 7

No. of thermometer

Cor. 509 E.

Corrected temperature

Air Surface 55

Drift

Trawl or dredge Trawl

## SOUNDING WIRE.

## DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

21

0

11-14-40

52

100

24 20

46.2

200

27.05

11-45 =

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400



Sano Sali, S 53° E. 3 mi

<p>Waga (Pencil)</p> <p>Increased by 10 to 5000</p> <p>4.16</p> <p>1.6</p>		2500	40° 42' 91"
		2600	35° 00' 30" N
		2700	139° 42' 25" E
		2800	
		2900	
		3000	
		3100	
		3200	
		3300	
		3400	
		3500	
		3600	
		3700	
		3800	
		3900	
		4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	11.0	11.0		
50	11.0	11.0		
100	11.0	11.0		
200	11.0	11.0		
300	11.0	11.0		
400				
500				
600				
700				
800				
900				
1000				

# REMARKS:

Not enough water.

No. *62*Date *July 11*

Machine. — Reel. —

Turns *33*Cor. + *2*Depth *35 fms*Shot or lead *31 #*Bottom *gy. s. + G.*

Bottom temperature

No. of thermometer *57110*

Cor.

Corrected temperature

Air

Surface

Drift *4 1/2 m*Trawl or dredge *ocean*

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Duno Sals, 8.55° S. 2.45 m

<p>OK J.C.</p> <p>496 12 23 10 256.3 23</p> <p>55° 11'</p>		2500	440° 15' 11"
		2600	350° 00' 00" N
		2700	139° 42' 50" S
		2800	
		2900	
		3000	
		3100	
		3200	
		3300	
		3400	
		3500	
		3600	
		3700	
		3800	
		3900	
		4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100	✓ 1	1000		
200	✓ 1	"		
300	✓ 1	"		
400	✓ 1	"		
500				
600				
700				
800				
900				
1000				

REMARKS:

Staircase

No. \_\_\_\_\_ Date \_\_\_\_\_  
Machine. \_\_\_\_\_ Reel. \_\_\_\_\_  
Turns \_\_\_\_\_ Cor. + \_\_\_\_\_ Depth \_\_\_\_\_  
Shot or lead \_\_\_\_\_  
Bottom gy. S. bk. Sp. ink. Sh. \_\_\_\_\_  
Bottom temperature \_\_\_\_\_  
No. of thermometer \_\_\_\_\_ Cor. \_\_\_\_\_  
Corrected temperature \_\_\_\_\_  
Air \_\_\_\_\_ Surface \_\_\_\_\_ Drift \_\_\_\_\_  
Trawl or dredge \_\_\_\_\_

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		60		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Sun. Saki, 55° 5. 2.8

Waga Penn.	2500	41° 12' 91.
	2600	35° 00' 05" JX
	2700	139° 42' 20" S
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	7.0	Fish		
50				
100	✓ 1.2	Actinaria		
200	✓ 1.0	Annulid		
300	✓ 1.0	Cephalopods		
400	✓ 1.0	Crustacea		
500	✓ 2.0	"		
600	✓ 1.4	Holothurid		
700	✓ 4.0	Sponges		
800				
900				
1000				

REMARKS:

No. 3163 Date 22 May 1900Machine. — Reel. 1Turns 47 Cor. + 2 Depth 49Shot or lead 16Bottom S. brk sh

Bottom temperature

No. of thermometer 7446 Cor.Corrected temperature 46.0 WAir Surface Drift 4/12 m

Trawl or dredge

## SOUNDING WIRE.

## DREDGE ROPE.

DOWN.	UP.	TURNS.	DOWN.	UP.
1-44		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Seno Sadi. S 63° E. 3 1/2 m

Uragul Pamel	2500	40° 12' 91"
	2600	35° 00' 10" JV
to 52 fms -	2700	139° 41' 40" 8
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	✓ 6.00	Therm		
50				
100	✓ 10.00	Therm		
200	✓ 1 "	Actinidae		
300	✓ 1 "	Crustacea		
400	✓ 2 "	"		
500	✓ 1 "	Crinoid		
600	✓ 2 "	Alcyonaria		
700	✓ 2 "	Pennatulidae		
800				
900				
1000				

REMARKS:

No. *No* station Date

*Machine.* *Reel.*

Turns *170* Cor. + *2* Depth *172 1/2*

Shot or lead *16 #*

Bottom *W. G.*

Bottom temperature

No. of thermometer *11110* Cor.

Corrected temperature

Air *68* Surface *64* Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>1 1/2</i>	<i>1 1/2</i>	0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *3742* Date *27 March 1911*

Machine. Reel.

Turns *2* Cor. + *2* Depth *44*

Shot or lead *36*

Bottom *gy. S. gy. S. gy. S.*

Bottom temperature

No. of thermometer *11115* Cor.

Corrected temperature

Air *57* Surface *66* Drift *4/10 m*

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0  
100  
200  
300  
400  
500  
600  
700  
800  
900  
1000  
1100  
1200  
1300  
1400  
1500  
1600  
1700  
1800  
1900  
2000  
2100  
2200  
2300  
2400

Sun. Saki, 864° E. 2.5/6 m

Wage Tunnel

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

40° 12' 91-  
34° 59' 55" N  
139° 42' 05" E

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50	✓ 14.0	14.0		
100				
200	✓ 10.0	10.0		
300	✓ 9.0	9.0		
400	✓ 6.0	6.0		
500	✓ 1.0	1.0		
600	✓ 2.0	2.0		
700	✓ 2.0	2.0		
800	✓ 3.0	3.0		
900	✓ 5.0	5.0		
1000	✓ 2.0	2.0		

✓ 5.0  
✓ 1.0

## REMARKS:

Sponge  
Coral

No. *2765*Date *2/2/00*Machine. *2765*Reel. *2765*

Turns

Cor. +

Depth *1045 fms*

Shot or lead

Bottom *gy. M. fm.*

Bottom temperature

No. of thermometer *11000*

Cor.

Corrected temperature

Air *60*Surface *66*Drift *5-10 N*  
*1 1/10 W*Trawl or dredge *8*

## SOUNDING WIRE.

DOWN.

UP.

## TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Same Lake, S 51° W. 2 m

<p>Thage</p> <p>Off</p>	2500	40° 15' 41"
	2600	34° 59' 40" N
	2700	130° 47' 10" E
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50			a	
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Cat. no. 42

No. 4012 *Hyp* Date *2 June 1900*  
*Machine #3* Reel. *Built 1898*  
 Turns *1255* Cor. + *116* Depth *1371 fms*  
 Shot or lead *35 lb*  
 Bottom *vol S. & Part.*  
 Bottom temperature  
 No. of thermometer } *None* Cor.  
 Corrected temperature  
 Air *70* Surface *72* Drift *7.1*  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>7.17.30</i>	<i>52.20</i>	0		
<i>19.00</i>	<i>51.15</i>	100		
<i>19.51</i>	<i>50.20</i>	200		
<i>20.50</i>	<i>49.21</i>	300		
<i>21.55</i>	<i>48.25</i>	400		
<i>23.00</i>	<i>47.10</i>	500		
<i>24.15</i>	<i>46.05</i>	600		
<i>25.00</i>	<i>44.55</i>	700		
<i>26.15</i>	<i>43.45</i>	800		
<i>27.25</i>	<i>42.40</i>	900		
<i>28.10</i>	<i>41.30</i>	1000		
<i>29.55</i>	<i>40.15</i>	1100		
<i>31.50</i>	<i>38.50</i>	1200		
<i>33.45</i>	<i>38 =</i>	1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Station 146,

77°W, 47 miles

		2500	440.5	1300
		2600	35° 54'	Jr
		2700	141° 49'	8
		2800		
		2900		
		3000		
		3100		
		3200		
		3300	508.5	360
		3400	1255	144
		3500	3780	116
		3600		1255
		3700		1371
		3800		f
		3900		
		4000		

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *1013-494* Date *3<sup>rd</sup> June 1900*  
 Machine. *43* Reel. *Reel 1/4*  
 Turns *1615* Cor. + *144* Depth *1719 fms*  
 Shot or lead *60 lb.*  
 Bottom *rk S + Coar*  
 Bottom temperature  
 No. of thermometer *1111* Cor.  
 Corrected temperature  
 Air *66* Surface *72* Drift *none*  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>16.15</i>	<i>25.30</i>	0		
<i>17.10</i>	<i>24.50</i>	100		
<i>18.10</i>	<i>24.10</i>	200		
<i>19.35</i>	<i>23.40</i>	300		
<i>20.25</i>	<i>23.10</i>	400		
<i>21.10</i>	<i>22.30</i>	500		
<i>22.10</i>	<i>21.50</i>	600		
<i>23.10</i>	<i>21.10</i>	700		
<i>24.10</i>	<i>20.30</i>	800		
<i>25.10</i>	<i>19.50</i>	900		
<i>26.10</i>	<i>19.10</i>	1000		
<i>27.10</i>	<i>18.30</i>	1100		
<i>28.10</i>	<i>17.50</i>	1200		
<i>29.10</i>	<i>17.10</i>	1300		
<i>30.10</i>	<i>16.30</i>	1400		
<i>31.10</i>	<i>15.50</i>	1500		
<i>32.10</i>	<i>15.10</i>	1600		
<i>33.10</i>	<i>14.30</i>	<i>1615</i>		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



*Station 2061 S. 74° N. 76° W.*

		2500	<i>44.2</i>	<i>1300</i>
		2600	<i>36° 05' N</i>	
		2700	<i>142° 23' E</i>	
		2800		
		2900		
		3000		
		3100		
		3200	<i>1615</i>	<i>116</i>
		3300	<i>3430</i>	<i>144</i>
		3400		<i>1015</i>
		3500		<i>159</i>
		3600		
		3700		
		3800		
		3900		
		4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *4014* Date *5*

Machine. Reel.

Turns *2* Cor. + *2* Depth *2*Shot or lead *60 lb*Bottom *vol S. + Co*

Bottom temperature

No. of thermometer *None* Cor.

Corrected temperature

Air *68* Surface *75* Drift

Trawl or dredge

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Fraser Lake, 2.73 mi. 96 mile

2500	2500	2500	2500	2500
2600	2600	2600	2600	2600
2700	2700	2700	2700	2700
2800	2800	2800	2800	2800
2900	2900	2900	2900	2900
3000	3000	3000	3000	3000
3100	3100	3100	3100	3100
3200	3200	3200	3200	3200
3300	3300	3300	3300	3300
3400	3400	3400	3400	3400
3500	3500	3500	3500	3500
3600	3600	3600	3600	3600
3700	3700	3700	3700	3700
3800	3800	3800	3800	3800
3900	3900	3900	3900	3900
4000	4000	4000	4000	4000

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

## REMARKS:

Due to current, it was im-  
possible to get an accurate reading  
and the depth is estimated at  
3800 fms. The difference being  
deducted the value is 3700  
fms.

No. 4015 Date 3 June 1880  
 Machine #3 Reel B

Turns Cor. + Depth

Shot or lead 60

Bottom fine spec.

Bottom temperature 55

No. of thermometer 72446 Cor.

Corrected temperature

Air 73 Surface 75 Drift none

Trawl or dredge

SOUNDING WIRE.

TURNS.

DREDGE ROPE.

DOWN.

UP.

DOWN.

UP.

10-03.05	42.25	0
03.45	41.10	100
04.25	40.00	200
05.15	38.10	300
06 =	37.30	400
06.50	36.00	500
07.45	34.30	600
08.40	33.10	700
09.35	32.00	800
10.30	31.00	900
11.30	30.00	1000
12.30	29.00	1100
13.35	27.50	1200
14.35	26.45	1300
15.35	25.15	1400
16.40	24.00	1500
17.45	22.45	1600
18.55	20.10	1700
20.10	18.40	1800
21.20	17.10	1900
22.45	15.30	2000
24.10	13.45	2100
25.35	12.10	2200
27.00	10.40	2300
28.30	09.25	2400

25.25	25.14	2500		
31.12	25.11	2600		
34.50	25.12	2700		
35.45	25.12	2800		
37.25	25.12	2900		
38.10	25.12	3000		
40.10	25.12	3100		
41.45	25.12	3200		
43 =	41.10	3300		
44.25	41.10	3400		
45.45	36.50	3500	5355	260
47.10	29 =	3600		
48.50	26.30	3700		
52.25	24.15	3800		
55 =	22 -	3900		
56.50	17.10	4000		

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *4015* Date *3 June 1900*  
 Machine. *#3* Reel. *Bright*  
 Turns *4225* Cor. + *254* Depth *(4479)*  
 Shot or lead *60*  
 Bottom *no specimen*  
 Bottom temperature  
 No. of thermometer *2000* Cor.  
 Corrected temperature  
 Air *73* Surface *75* Drift  
 Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
<i>10-58.20</i>	<i>14-</i>	<i>4100</i>		
<i>11-00.10</i>	<i>04.50</i>	<i>4200</i>		
<i>01.11</i>	<i>01.15</i>	<i>4225</i>		
		<del>300</del>		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Traverse Sec. 2, 7<sup>th</sup> N. 118 miles.

	2500	410 * 1300
	2600	360 300 20
	2700	143° 13' 15"
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	5035 260
	3500	4225 6
	3600	810 254
	3700	4225
	3800	4479
	3900	
	4000	

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

Depth estimated at not more than 4300 fms, & for same reasons as above at sounding station.

No. *2966* Date *5-11-11*

Machine. Reel.

Turns Cor. + Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *70* Surface *69* Drift *1/2 mile*

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0	<i>3.00</i>	<i>3.20</i>
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



Chicago San Diego, 1878, 108 miles

	2500	<del>210</del> 1300
	2600	36° 36' N
	2700	143° 12' E
	2800	
	2900	
	3000	
	3100	
	3200	
	3300	
	3400	
	3500	
	3600	
	3700	
	3800	
	3900	
	4000	

# SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50	✓ 2	1		
100	✓ 2	2		
200	✓ 2	3		
300	✓ 1	4		
400	✓ 2	5		
500	✓ 2	6		
600	✓ 2 or 3	7		
700	1 or 2	8		
800				
900				
1000				

# REMARKS:

Surface water at 1000 fms. 35.5° N, 143.5° E

No. *4016* Date *Oct 16 1881*

Machine. Recl.

Turns *21* Cor. + *21* Depth *42*Shot or lead *60 lb mnd 10 lb*Bottom *gy s*Bottom temperature *35.1*No. of thermometer *92446* Cor.

Corrected temperature

Air *67* Surface *66* Drift

Trawl or dredge

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
	<i>24.55</i>	0		
	<i>23.50</i>	100		
	<i>22.45</i>	200		
	<i>21.35</i>	300		
	<i>20.30</i>	400		
<i>19.25</i>	<i>19.25</i>	500		
	<i>18.20</i>	600		
	<i>17.15</i>	700		
<i>16.10</i>	<i>16.10</i>	800		
<i>15.05</i>	<i>15.05</i>	900		
	<i>14.00</i>	1000		
	<i>13.30</i>	1100		
	<i>12.20</i>	1200		
	<i>11.15</i>	1300		
	<i>10.40</i>	1400		
	<i>09.15</i>	1500		
	<i>08.40</i>	1600		
	<i>07.15</i>	1700		
	<i>06.20</i>	1800		
	<i>05.50</i>	1900		
	<i>04.20</i>	2000		
	<i>03.50</i>	2100		
		2200		
		2300		
		2400		

*Ship's Log, 28 73 091, 74 miles*

	2500	<i>24.2</i>	<i>15.0</i>
	2600	<i>24.2</i>	<i>15.0</i>
	2700	<i>14.5</i>	<i>29.5</i>
	2800		
	2900		
	3000		
	3100		
	3200		
	3300		
	3400		
	3500		
	3600		
	3700		
	3800		
	3900		
	4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300				
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No. *111* Date *Dec 14 1881*  
*Machine* Reel.  
 Turns *14* Cor. + *18* Depth *14/18*  
 Shot or lead  
 Bottom *gy. m.*  
 Bottom temperature  
 No. of thermometer *(11113)* Cor.  
 Corrected temperature  
 Air *68* Surface *67* Drift *835" N. 3.9'*  
 Trawl or dredge *6 ft. V. M.*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>14-30</i>		0	<i>1.18.30</i>	<i>1.01</i>
<i>15-00</i>		<i>25</i>	<i>1.20.40</i>	
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Oloro Saki, N 67° E, 2.3 m

	2500	38° 20' 45" N	81.
	2600	141° 22' 50" E.	
	2700		
	2800		
	2900		
	3000		
	3100		
	3200		
	3300		
	3400		
	3500		
	3600		
	3700		
	3800		
	3900		
	4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	4 sp	Fishes		
50	1 "	Juni eate		
100	1 "	Gasteropods		
200	3 "	Lamelle		
300	2 "	Tridacna		
400	1 "	Dentalium		
500	4 "	Anomura		
600	3 "	Trachy		
700	2 "	Amphipoda		
800	2 "	Amphipoda		
900	7 "	Amphipoda		
1000	2 "	Starfish		

REMARKS:

2 " Holothurians  
 1 " Actinian  
 2 " Pennatulids

No. *2768* Date *June 11 1881*

Tanner Machine. Reel.

Turns *260* Cor. + *1* Depth *261*

Shot or lead *35 lb.*

Bottom *S. lt. gy.*

Bottom temperature

No. of thermometer *11000* Cor.

Corrected temperature

Air *67* Surface *64* Drift *28° 36.0'*

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

*8 26 00* *8 11 40*

*8 06 20* *8 11 30*

*260*

*35*

*40*

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

*11 00*

*8 11 20*

*17 10*

*2 10*

Hai Koku, 26° 15' N, 141° 20' E, 4-4 m

Shinichi Kikuchi

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

Jan. 21, 1911  
28° 15' 25" N  
141° 20' 10" E

OK  
1/2 m

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200				
300	Net came up capsize			
400				
500				
600				
700				
800				
900				
1000				

REMARKS:

No.

Date

Tanner Machine. Reel.

Turns 38 Cor. +

Depth

Shot or lead

26 lb.

Bottom

gn. M. S.

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

68

Surface

64

Drift

61° E. 1.4'

Trawl or dredge

## SOUNDING WIRE.

DOWN.

UP.

TURNS.

## DREDGE ROPE.

DOWN.

UP.

1510	4.15.00	0	15.00	9.25.00
1510	4.15.20	100	15.00	9.25.00
		200	15.00	9.25.00
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		



Maquoket Bay. N 55° E. E.S.W.

Winnetka Bay.

2500  
2600  
2700  
2800  
2900  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700  
3800  
3900  
4000

Zip about 81.

38° 12' N

141° 23' 50" E

425  
158  
455  
15  
270  
100

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200	Not come up captured.			
300				
400	500	Fishes		
500	1 "	Cephalopod		
600	1 "	Isopod		
700	4 "	Pennatulid		
800	1 "	Crustacean		
900	1 "	Chironomid		
1000	1 "	Annelid		

REMARKS: 1

2 " annelids  
3 " Sea urchin  
2 " Jelly fish  
1 " Holothurian  
1 " Pennatulid

No. *3175* Date *June 10, 1900*

Machine. — Reel.

Turns *40* Cor. + *2* Depth *42 fms*

Shot or lead *26 lbs* *45 estd*

Bottom *gn M S.*

Bottom temperature

No. of thermometer *1498* Cor.

Corrected temperature

Air *17* Surface *17* Drift *2° E. 1.2'*

Trawl or dredge *Common 10 ft net*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>10.11.15</i>	<i>10.11.15</i>	0	<i>9.45.20</i>	<i>10.11.15</i>
<i>10.11.15</i>	<i>10.11.15</i>	100	<i>9.47.50</i>	<i>10.12.50</i>
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Japan Sea, 3415, 4.3 m

Shinmaki Bay	2500	141° 51'	31° 11'
	2600		
	2700	141° 25'	30° 00'
	2800		
	2900		
	3000		
	3100	141° 25'	30° 00'
	3200		
	3300		
	3400		
	3500		
	3600		
	3700		
	3800		
	3900		
	4000		

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25	8.0	101		
50	2.1	102		
100	1.0	103		
200	2.0	104		
300	1.0	105		
400	1.0	106		
500	2.0	107		
600		108		
700				
800				
900				
1000				

REMARKS:

107 *H. M. L.*

No. *3000* Date *10 June 1901*

Machine. — Reel.

Turns *26* Cor. + *12* Depth *38*

Shot or lead *26 lb*

Bottom *gn M. S.*

Bottom temperature

No. of thermometer *None* Cor.

Corrected temperature

Air *68* Surface *63* Drift *S 6° E. 1.6'*

Trawl or dredge *Beam trawl*

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
<i>10.50.00</i>		0	<i>11.00.00</i>	
<i>10.51.00</i>		<i>90</i>	<i>11.01.00</i>	
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

Sumiki Saki, N 19° N., 4.5 m

Off Kinkasan

2500

Jap chart 81.

2600

2700

38° 10' 40" N

2800

141° 32' 20" E

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

~~496 17.  
59 9  
437 3  
59  
62~~

SERIAL TEMPERATURES.

DEPTH.	TEMP.	NO. OF THER.	COR.	COR. TEMP.
25				
50				
100				
200	Net came up capsized.			
300				
400	6 sp.	Fishes		
500	1 "	Juncate		
600	4 "	Gastropods		
700	4 "	Samellebrachs		
800	1 "	Dentalium		
900	1 "	Nudibranch		
1000	3 "	Anomura		
	3 "	Amphipods		

REMARKS:

7 " Annelids  
3 " Ophiurans.  
3 " Echini  
2 " Macrura  
2 " Pennatulids.

*No.* \_\_\_\_\_ *Date* \_\_\_\_\_  
*Machine.* \_\_\_\_\_ *Reel.* \_\_\_\_\_  
*Turns* \_\_\_\_\_ *Cor. +* \_\_\_\_\_ *Depth* \_\_\_\_\_  
*Shot or lead* \_\_\_\_\_  
*Bottom* \_\_\_\_\_  
*Bottom temperature* \_\_\_\_\_  
*No. of thermometer* \_\_\_\_\_ *Cor.* \_\_\_\_\_  
*Corrected temperature* \_\_\_\_\_  
*Air* \_\_\_\_\_ *Surface* \_\_\_\_\_ *Drift* \_\_\_\_\_  
*Trawl or dredge* \_\_\_\_\_

SOUNDING WIRE.		TURNS.	DREDGE ROPE.	
DOWN.	UP.		DOWN.	UP.
		0		
		100		
		200		
		300		
		400		
		500		
		600		
		700		
		800		
		900		
		1000		
		1100		
		1200		
		1300		
		1400		
		1500		
		1600		
		1700		
		1800		
		1900		
		2000		
		2100		
		2200		
		2300		
		2400		

04.50

14

18.40

25 21

25

29

56.30

⑥ 833° E. 1.0'